Elective Geog code: 2260 (paper 2)



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# 2023 Semester 1 &2 Plan for Secondary Three Express Elective Geography

# 1 Topics covered for Semester 1&2\*:

Weeks	Topics/ Learning Outcomes Pupils will be able to describe and explain the factors in the topics and also perform the skills as follows:	Coursebook pg	Assignments . WA. Exams	Date. Marks attained
Term 1/1 *New year (Mon-Tues)	Settling In and classroom routines Topic 1: Thinking Geographically  KQ1 What is the relationship between people and nature in their neighbourhoods?	Geography in Everyday Life		
	Relationship between people and nature     a) local communities and nearby nature areas are dependent upon each other     b) local communities and nearby nature areas mutually affect each other	P2-6	WS 1	
	Benefits enjoyed by people and nature     a) nature areas lower temperatures, remove pollutants and provide space for recreation     b) community activities promote the importance of environmental protection			
	Disadvantages to people and nature     a) wildlife from nearby nature areas may harm people and environmental protection limits development     b) visitors to nature cause soil erosion, damage vegetation, worsen pollution and disturb wildlife			
Term 1/2	Topic 1: Thinking Geographically  KQ1 What is the relationship between people and nature	Geography in Everyday Life		
	<ol> <li>in their neighbourhoods?</li> <li>Relationship between people and nature         <ul> <li>a) local communities and nearby nature areas are dependent upon each other</li> <li>b) local communities and nearby nature areas mutually affect each other</li> </ul> </li> <li>Benefits enjoyed by people and nature</li> </ol>	P2-6	WS 1	
	a) nature areas lower temperatures, remove pollutants and provide space for recreation b) community activities promote the importance of environmental protection			
	Disadvantages to people and nature     a) wildlife from nearby nature areas may harm people and environmental protection limits			

	development b) visitors to nature cause soil erosion, damage vegetation, worsen pollution and disturb wildlife		
Term 1/3 *CNY (Fri celebration)	Topic 1: Thinking Geographically  KQ2: How do people acquire a sense of place in their neighbourhoods?	Geography in Everyday Life	
	Sense of place     a) people associate importance, meanings and memories with specific locations in their neighbourhoods     b) people's experiences with natural and built environments, and interaction with others at these locations	P7-10	WS 2
	Acquiring a sense of place     a) individuals repeatedly encounter people and objects along familiar paths or roads during regular travel     b) individuals experience significant or memorable events at local landmarks and gathering places		
	Representing a sense of place     a) individuals and organisations use different forms and types of media to express people's sense of place     b) individuals' sense of place could be enhanced or contradicted by these different representations		
Term 1/4 *CNY (Mon & Tues)	Topic 1: Thinking Geographically  KQ2: How do people acquire a sense of place in their	Geography in Everyday Life	
	neighbourhoods?  1. Sense of place     a) people associate importance, meanings and memories with specific locations in their neighbourhoods     b) people's experiences with natural and built environments, and interaction with others at these locations	P7-10	WS 2
	Acquiring a sense of place     a) individuals repeatedly encounter people and objects along familiar paths or roads during regular travel     b) individuals experience significant or memorable events at local landmarks and gathering places		
	Representing a sense of place     a) individuals and organisations use different forms and types of media to express people's sense of place     b) individuals' sense of place could be enhanced or contradicted by these different representations		

Term 1/5	<ul> <li>Topic 1: Thinking Geographically</li> <li>KQ3: What is the relationship between locations in a neighbourhood?</li> <li>1. Regions <ul> <li>a) areas with similar physical and/or human characteristics or is known for something</li> <li>b) spheres of influence of services, events and objects on other locations in the area</li> </ul> </li> <li>2. Spatial patterns <ul> <li>a) non-random arrangement of services, events and objects in an area</li> <li>b) services, events and objects arranged in recognisable shapes, geometry, clusters and at regular intervals</li> </ul> </li> <li>3. Spatial associations <ul> <li>a) tendency of a pair of services, events and objects to locate near each other</li> <li>b) tendency suggests a connection between a service, event or object</li> </ul> </li> <li>Topic 1: Thinking Geographically</li> </ul>	Geography in Everyday Life P11-14 Geography	WS 3
	<ol> <li>KQ4: How are neighbourhoods organised in Singapore?</li> <li>Spatial scales in Singapore         <ul> <li>a) more than 20 towns spread across the country, catering to different lifestyles</li> <li>b) each town has a town centre, serving as commercial and activity hubs for residents living in its neighbourhoods</li> </ul> </li> <li>Spatial hierarchies in Singapore         <ul> <li>a) nested areas of different sizes beginning with a single residential unit</li> <li>b) clusters of residential units form a precinct, which in turn form neighbourhoods that combine into a town</li> </ul> </li> <li>Town planning in Singapore         <ul> <li>a) serve residents and provide for nature at distinct levels of the precinct, neighbourhood and town</li> <li>b) create connections and synergies across precincts, neighbourhoods and towns</li> </ul> </li> </ol>	in Everyday Life P15-19	WS 4
Term 1/7	<ul> <li>Topic 2: Sustainable Development</li> <li>KQ1: What are sustainable urban neighbourhoods?</li> <li>1. Sustainable development <ul> <li>a) meet the needs of the present population by achieving high standards of living for all</li> <li>b) ensure the ability of future generations to meet their own needs</li> </ul> </li> </ul>	Geography in Everyday Life P20-24	WS 5

	<ol> <li>Economic and social sustainability in urban neighbourhoods         <ul> <li>a) high enough population density to support local businesses, and keep transport and infrastructure costs low</li> <li>b) small population size to enable regular interaction among residents and to discuss decisions affecting the neighbourhood</li> </ul> </li> <li>Environmental sustainability in urban neighbourhoods         <ul> <li>a) ample protection for nature and facilities that supports waste minimisation and recycling</li> <li>b) adopts energy and water efficient design approaches for buildings and landscapes</li> </ul> </li> </ol>			
Term 1/8	<ol> <li>Topic 2: Sustainable Development</li> <li>KQ1: What are sustainable urban neighbourhoods?</li> <li>Sustainable development         <ul> <li>meet the needs of the present population by achieving high standards of living for all</li> <li>ensure the ability of future generations to meet their own needs</li> </ul> </li> <li>Economic and social sustainability in urban neighbourhoods         <ul> <li>high enough population density to support local businesses, and keep transport and infrastructure costs low</li> <li>small population size to enable regular interaction among residents and to discuss decisions affecting the neighbourhood</li> </ul> </li> <li>Environmental sustainability in urban neighbourhoods         <ul> <li>ample protection for nature and facilities that supports waste minimisation and recycling</li> <li>adopts energy and water efficient design approaches for buildings and landscapes</li> </ul> </li> </ol>	Geography in Everyday Life P20-24	WA1 WS 5	
Term 1/9	<ol> <li>Topic 2: Sustainable Development</li> <li>KQ2: What ecosystem services are found in urban neighbourhoods?</li> <li>Urban neighbourhoods as ecosystems         <ul> <li>a) ecosystems consist of living communities and the non-living environment interacting with one another</li> <li>b) aquatic and terrestrial ecosystems in neighbourhoods including ponds, lakes, parks and forests</li> </ul> </li> <li>Provisioning and regulating services         <ul> <li>a) provisioning services available in neighbourhoods include fresh water and food</li> <li>b) regulating services in neighbourhoods include</li> </ul> </li> </ol>	Geography in Everyday Life P25-28	WS 6	

Term 1/10	microclimate regulation, flood mitigation, air and water quality.  3. Cultural and supporting services a) cultural services in neighbourhoods include aesthetics, education and recreation b) supporting services in neighbourhoods include soil formation, pollination and photosynthesis  Topic 2: Sustainable Development  KQ3: What are common hazards in urban neighbourhoods?  1. Fire hazards a) fires in neighbourhoods are commonly caused by faulty electrical appliances and wiring, and unattended cooking fires b) negative consequences of fires include burn injuries, smoke inhalation and property damage  2. Air pollution hazards a) air pollution in neighbourhoods is commonly caused by burning vegetation and industrial and motor vehicle emissions b) negative consequences of air pollution include respiratory infections, heart disease and lung	Geography in Everyday Life P29-32	WS 7	
	cancer  3. Traffic hazards a) traffic accidents in neighbourhoods are commonly caused by speeding, red-light running and drunk driving b) negative consequences of traffic accidents include serious injury and loss of life			
	MARCH HOLIDAY			
Term 2/1	Topic 2: Sustainable Development  KQ4: How to build sustainable urban neighbourhoods?	Geography in Everyday Life		
	Environmental stewardship     a) promote volunteerism among neighbourhood residents to share knowledge with others about the importance of healthy ecosystems     b) partner public and private stakeholders in environmental stewardship efforts	P33-38	WS 8	
	Disaster risk management     a) reduce neighbourhoods' exposure to hazards and the vulnerability of people and properties to hazards     b) improve residents' preparedness in responding to hazards and implement monitoring and warning systems			
	3. Community resilience			

	<ul> <li>a) strengthen relationships among residents and raise their awareness of potential hazards</li> <li>b) develop residents' ability to organise themselves and equip themselves with resources to resist, adapt and recover from a disaster.</li> </ul>			
Term 2/2	Bitesize GI  1. Topic 3: Geographical Methods  KQ1: How to design fieldwork?  1. Research questions and hypotheses a) identify a topic or thesis from textbooks, news articles, websites b) craft a question that outlines a specific scope and a measurable hypothesis about two variables  2. Data collection sequence through primary and/or secondary sources a) collect quantitative data, then design qualitative data collection to examine patterns and trends b) collect qualitative data, then design quantitative data collection to verify observations  3. Limitations and risks a) adjust research aim, study area, sample size and timeframe according to available resources b) implement measures to avoid harming oneself, other people and nature	Geography in Everyday Life P39-43	GI e-booklet	
Term 2/3 *Good Friday (Fri)	Bitesize GI Topic 3: Geographical Methods  KQ2: How to collect primary data?  1. Sampling     a) use non-probability sampling methods including convenience and quota sampling     b) use probability sampling methods including simple random sampling and stratified random sampling  2. Closed-ended questionnaire surveys     a) create pre-defined responses to questions that are limited to short phrases, single words or numbers     b) use rating scales to guide responses including the Likert Scale, frequency scale and ranking scale  3. Mental maps     a) visualise experiences by drawing features and adding labels onto the base map of a study area b) conduct semi-structured interviews with openended questions exploring features and labels added to the map	Geography in Everyday Life P44-54	GI e-booklet	
Term 2/4	Bitesize GI  Topic 3: Geographical Methods	Geography in Everyday Life	GI e-booklet	

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	<ul> <li>KQ3: How to process and analyse data?</li> <li>Closed-ended questionnaire surveys <ul> <li>interpret responses using measures of frequency including counts and percentages</li> <li>interpret responses using measures of central tendency including mean, mode and median</li> </ul> </li> </ul>	P55-64	
	Mental maps     a) analyse how well maps represent reality and how features and labels are drawn or added     b) examine how memories of experiences are represented on maps and described during semi-structured interviews		
	Patterns and relationships     a) visualise positive and negative correlations using scatter plots and best-fit lines     b) identify recognisable geometric shapes, clusters and repetitions		
Term 2/5	Bitesize GI Topic 3: Geographical Methods	Geography in Everyday	GI e-booklet
	KQ4: How to present findings?	Life	
		P65-71	
	Maps     a) represent spatial information using dots, lines and		
	polygons b) provide title, date, orientation, scale, legend, author and source(s) on maps		
	Graphs     a) use bar graphs and pie charts to show distributions     b) use line graphs to show trends and relationships between two variables		
	Photographs and texts     a) use satellite and aerial images to display spatial information     b) use colour-coded quotations and word clouds to		
Term 2/6	represent qualitative analyses  Topic 1: Plate Tectonics	Tectonics	
*Hari Raya Puasa (Mon)	KQ1: What is the plate tectonic theory?	P1-4	WS 9
	Plate tectonic theory     a) Earth's internal structure consists of core,     mantle and crust, including continental and     oceanic crusts     b) explains how forces within Earth drives global     plate movements		
	Convection currents     a) within the hot softened mantle below the crust     b) being the driving force of overlying plates		

	Slab-pull force     a) gravity-controlled subduction of denser oceanic plate drags the rest of the plate along     b) drags the rest of the plate along			
Term 2/7	Topic 1: Plate Tectonics	Tectonics		
*Labour Day (Mon)	KQ1: What is the plate tectonic theory?	P1-4	WS 9	
	Plate tectonic theory     a) Earth's internal structure consists of core,     mantle and crust, including continental and     oceanic crusts     b) explains how forces within Earth drives global     plate movements			
	Convection currents     a) within the hot softened mantle below the crust b) being the driving force of overlying plates			
	Slab-pull force     a) gravity-controlled subduction of denser oceanic plate     b) drags the rest of the plate along			
Term 2/8	Topic 1: Plate Tectonics	Tectonics	WA2	
	KQ 2: How does seafloor spreading support the plate tectonic theory?	P5-7	WS10	
	Seafloor spreading     a) magma rises through mid-ocean ridges     b) forms new oceanic crusts			
	Evidence from age of rocks     a) younger rocks are found nearer to the crest of mid-ocean ridges     b) rocks get progressively older further away from mid-ocean ridges			
	Evidence from limited sediment accumulation     a) destruction of older oceanic crusts at trenches     b) oceanic crusts younger than continental crusts			
Term 2/9	Topic 1: Plate Tectonics	Tectonics	WS11	
	KQ3: How does magnetic striping support the plate tectonic theory?	P8-11		
	Magnetic striping     a) normal and reversed polarity     b) stripes of rock on the seafloor with alternating magnetic properties			
	Evidence from rock composition     a) basalt is a volcanic rock that forms the oceanic			

	crust b) contains minerals that can be influenced by Earth's magnetic field  3. Evidence from rock patterns a) alternating polarity forms a striped pattern b) not random or isolated occurrences			
Term 2/10	<ul> <li>Topic 1: Plate Tectonics</li> <li>KQ4: What will happen to different tectonic plates when they move at the different plate boundaries?</li> <li>1. Divergent plate boundaries <ul> <li>a) plates move away from each other</li> <li>b) results in mid-oceanic ridges, volcanoes including submarine volcanoes and volcanic islands, rift systems and earthquakes</li> </ul> </li> <li>2. Convergent plate boundaries <ul> <li>a) plates move towards each other</li> <li>b) results in fold mountains, volcanoes including submarine volcanoes, oceanic trenches and earthquakes</li> </ul> </li> <li>3. Transform plate boundaries <ul> <li>a) plates slide past each other</li> <li>b) results in faults and earthquakes</li> </ul> </li> </ul>	Tectonics P12-22	WS12	
*Vesak Day (Fri)	JUNE HOLIDAY			
Term 3/1 *Hari Raya Haji (Thurs)	<ol> <li>Topic 2: Earthquakes and volcanoes</li> <li>KQ1: How do tectonic processes affect the magnitude of earthquakes?</li> <li>Tectonic processes of earthquakes         <ul> <li>a) stress builds up and exceeds strength of the fault</li> <li>b) sudden release of seismic waves, radiating energy from the focus</li> </ul> </li> <li>Magnitude of earthquakes         <ul> <li>a) affected by amount of energy released through ground movement</li> <li>b) recorded using seismometers</li> </ul> </li> <li>Measuring earthquakes         <ul> <li>a) Richter Scale measures local magnitude of earthquakes</li> <li>b) Moment Magnitude Scale measures larger earthquakes more reliably</li> </ul> </li> </ol>	Tectonics P23-26	WS13	

Term 3/2 *Youth Day	Topic 2: Earthquakes and volcanoes	Tectonics	WS13	
(Mon)	KQ1: How do tectonic processes affect the magnitude of earthquakes?	P23-26		
	Tectonic processes of earthquakes     a) stress builds up and exceeds strength of the fault     b) sudden release of seismic waves, radiating     energy from the focus			
	Magnitude of earthquakes     a) affected by amount of energy released through ground movement     b) recorded using seismometers			
	Measuring earthquakes     a) Richter Scale measures local magnitude of earthquakes     b) Moment Magnitude Scale measures larger earthquakes more reliably			
Term 3/3	Topic 2: Earthquakes and volcanoes	Tectonics	WS14	
	KQ2: How do tectonic processes affect the magnitude of volcanic eruptions?	P27-33		
	Tectonic processes of volcanic eruptions     a) magma consisting of dissolved gases is less dense     b) forces its way upward and breaks through weak areas in the Earth's crust			
	Magnitude of volcanic eruptions     a) determined by amount of dissolved gases and magma viscosity     b) stratovolcanoes erupt violently and shield volcanoes emit magma gently			
	Measuring volcanic eruptions     a) Volcanic Explosivity Index measures relative explosivity of historic eruptions     b) considers the volume of ejected materials, height of eruption cloud and duration of the eruption			
Term 3/4	Topic 2: Earthquakes and volcanoes	Tectonics	WS15	
	KQ3: How might distribution of earthquakes and volcanoes influence the spread of tectonic hazards?	P34-40		
	Distribution of earthquakes     a) along all plate boundaries     b) largest concentration at the Pacific Ring of Fire			
	Distribution of volcanoes     a) located near convergent and divergent plate			

Term 3/5 *HBL 25-27 Jul (Tues- Thurs) due to National Oral Exams	boundaries b) hot spot volcanoes are found away from plate boundaries  3. Distribution of tectonic hazards a) most located near plate boundaries, and near earthquakes and volcanoes b) tsunamis and volcanic ash may spread beyond geographic region  Topic 2: Earthquakes and volcanoes  KQ4: How might tectonic hazards affect the natural and human systems?  1. Earthquake hazards and their impacts	<b>Tectonics</b> P41-55	WS16	
*3E OBS (24- 38 Jul)	<ul> <li>a) hazards include ground shaking, soil liquefaction, landslides and tsunamis</li> <li>b) impacts include destroying ecosystems, properties and infrastructure; disrupting services; and causing injury and loss of life</li> </ul>			
	<ul> <li>2. Volcanic eruption hazards and their impacts <ul> <li>a) hazards include tephra, volcanic gases, lava flows, pyroclastic flows, lahars and volcanic landslides</li> <li>b) impacts include destroying ecosystems, properties and infrastructure; disrupting services; and threaten public health and cause injury and loss of life</li> </ul> </li> </ul>			
	3. Benefits of volcanic eruptions and living near volcanoes  a) volcanic eruption provides fertile soil for farming after volcanic materials are broken down and weathered, and makes available valuable minerals and building materials  b) living near volcanoes allow harnessing of geothermal energy and tourism activities			
Term 3/6	Topic 2: Earthquakes and volcanoes	Tectonics	WA3	
*3N OBS (31- 4 Aug)	KQ4: How might tectonic hazards affect the natural and human systems?	P41-55	WS16	
	Earthquake hazards and their impacts     a) hazards include ground shaking, soil liquefaction, landslides and tsunamis     b) impacts include destroying ecosystems, properties and infrastructure; disrupting services; and causing injury and loss of life			
	Volcanic eruption hazards and their impacts     a) hazards include tephra, volcanic gases, lava flows, pyroclastic flows, lahars and volcanic landslides     b) impacts include destroying ecosystems,			

	properties and infrastructure; disrupting services; and threaten public health and cause injury and loss of life  3. Benefits of volcanic eruptions and living near volcanoes a) volcanic eruption provides fertile soil for farming after volcanic materials are broken down and weathered, and makes available valuable minerals and building materials b) living near volcanoes allow harnessing of geothermal energy and tourism activities			
Term 3/7 *National Day	Topic 3: Disaster Management			
(Tues -Thurs)	KQ1: How does disaster risk management help achieve sustainable development?	Tectonics	WS17	
	Disaster risk management     a) prevent, reduce and manage disaster risks         thus strengthening resilience     b) apply plans and actions which are developed into various strategies by communities	P56-60		
	Disaster risk and loss     a) brings serious economic, social and environment consequences     b) is costly for individuals and countries, and may hinder their development			
	Reducing disaster risks     a) important for disaster-prone developing countries     b) a cost-effective investment in preventing future losses, thus contributing to sustainable development			
Term 3/8	Topic 3: Disaster Management			
	KQ1: How does disaster risk management help achieve sustainable development?	<b>Tectonics</b> P56-60	WS17	
	Disaster risk management     a) prevent, reduce and manage disaster risks     thus strengthening resilience     b) apply plans and actions which are developed into various strategies by communities			
	Disaster risk and loss     a) brings serious economic, social and environment consequences     b) is costly for individuals and countries, and may hinder their development			
	Reducing disaster risks     a) important for disaster-prone developing			

Term 3/9 Term 3/10 *Teacher's day (Thurs-Fri)	countries b) a cost-effective investment in preventing future losses, thus contributing to sustainable development  Revision for EOY  Revision for EOY  SEPTEMBER HOLIDAY		
Term 4/1	Revision for EOY		
Term 4/2	Revision for EOY		
Term 4/3	End-of-year Exams		
Term 4/4	End-of-year Exams		
Term 4/5	Go through EOY paper		
Term 4/6	<ol> <li>KQ2: Why do disaster risks caused by earthquakes and volcanic eruptions vary across places?</li> <li>Tectonic disaster risk         <ul> <li>is the interaction between tectonic hazards, and vulnerability and exposure to earthquakes and volcanic eruptions</li> <li>results in potential loss of human lives and damage to properties</li> </ul> </li> <li>Factors influencing disaster risks caused by earthquakes         <ul> <li>nature of hazards including duration and time of shaking</li> <li>vulnerable conditions including quality of building design and construction, and soil and rock properties; and exposure including population density and distance from epicentre</li> </ul> </li> <li>Factors influencing disaster risks caused by volcanic eruptions         <ul> <li>nature of hazards including chemical composition of magma</li> <li>vulnerable conditions including availability of surface and ground water in the development of lahars, prevailing wind conditions affecting direction and distribution of tephra; and exposure including presence of human settlements</li> </ul></li></ol>	Tectonics P61-70	WS18
Term 4/7 (Last week of sch sec 1-2)	<ul> <li>KQ2: Why do disaster risks caused by earthquakes and volcanic eruptions vary across places?</li> <li>4. Tectonic disaster risk</li> <li>c) is the interaction between tectonic hazards, and vulnerability and exposure to earthquakes and volcanic eruptions</li> </ul>	Tectonics P61-70	WS18

<ul> <li>d) results in potential loss of human lives and damage to properties</li> <li>5. Factors influencing disaster risks caused by earthquakes</li> <li>c) nature of hazards including duration and time of shaking</li> <li>d) vulnerable conditions including quality of building design and construction, and soil and rock properties; and exposure including population density and distance from epicentre</li> <li>6. Factors influencing disaster risks caused by volcanic eruptions</li> <li>c) nature of hazards including chemical composition of magma</li> <li>d) vulnerable conditions including availability of surface and ground water in the development of lahars, prevailing wind conditions affecting direction and distribution of tephra; and exposure including presence of human settlements</li> </ul>		
DECEMBER HOLIDAY	_	

<sup>\*</sup>Please note that the topics might be subject to minor changes. Pupils will be updated accordingly.

### 2 Assessment Plan

Competer 1	WA1: Class Test 1	15%	Samastar 2	WA3: Class Test 3	15%
Semester 1	WA2: Class Test 2	15%	Semester 2	End-of-year Exam	55%

### 3 <u>Details of End-of-Year Examinations</u>

End-of-year Components		Date	Guidelines	
Paper [1h			-	All topics covered in semester 1 and 2.
Section	Details	Marks		
Α	Questions 1: Cluster – Geography in Everyday Life	25m	Term 4, Week 3	For the paper,     candidates are to write
В	Question 3: Cluster 4 – Tectonics	25m	- Week 3	<ul> <li>their answers on the question booklet.</li> <li>Total marks for the paper is 50m.</li> </ul>

### 4 Absence from Assessments

- a) A medical certificate must be produced if a student is absent for Weighted Assessment.
- b) Absence from any Weighted Assessment without a valid reason will result in zero mark.
- c) Student who is absent from a Weighted Assessment will have to do a make-up session on the day he/she returns to school.